

CLAIMS:

1. A display device, comprising:

a display element having a display function; and

a functional element having a function different from that of the display element, wherein:

the functional element is laminated on the display element so as to be confined in a planar area of the display element, and

the display element includes a thin film substrate provided with a circuit element of a display section, the thin film substrate having provided directly thereon (i) a circuit block of a display system which circuit block processes an externally inputted video signal so as to drive the display section, and (ii) a circuit block of a separate system, which circuit block processes a signal regarding the functional element, and

the circuit block of the separate system receives and sends the signal through a flexible printed circuit board which is connected to the thin film substrate and which enables connection to an external device.

2. The display device according to Claim 1, wherein the circuit block of the separate system on the display element, and the functional element to be laminated on the display element, are connected through (i) a first

printed circuit board, which is said printed circuit board for connecting the display element to the external device, and (ii) a second flexible printed circuit board, a first end of which is connected to the functional element and a second end of which is connected to a middle portion of the first printed circuit board.

3. The display device according to Claim 1 or 2, wherein the printed circuit board for connecting the display element to the external device inputs the video signal into the display element.

4. A display device, comprising:

a display element having a display function; and

a functional element having a function different from that of the display element, wherein:

the functional element is laminated on the display element so as to be confined in a planar area of the display element, and

the display element includes a thin film substrate provided with a circuit element of a display section, the thin film substrate having provided directly thereon an arithmetic processing device, and

the functional element and the thin film substrate are connected by using (i) a first flexible printed circuit

board, enabling external connection, a first end of which is connected to the display element, and (ii) a second flexible printed circuit board, a first end of which is connected to the functional element and a second end of which is connected to a middle portion of the first printed circuit board.

5. The display device according to any one of Claims 1 to 3, wherein:

a plurality or plural types of said functional element are provided, and

said thin film substrate is provided with a plurality or plural types of circuit blocks of separate systems corresponding to the plurality or plural types of said functional element.

6. The display device according to Claim 4, wherein a plurality or plural types of said functional element are provided.

7. The display device according to any one of Claims 1 to 6, wherein:

said functional element is either a sound source element for generating a sound corresponding to an audio signal or a sound collection element for collecting a voice

so as to convert the voice into the audio signal, or

when the plurality or plural types of said functional element are provided, at least one of the plurality or plural types of said functional element is either the sound source element or the sound collection element.

8. The display device according to any one of Claims 1 to 7, wherein:

said functional element is a touch panel which is disposed on a side of a display surface of the display element and which outputs a signal corresponding to an input position of an operator, or

when the plurality or plural types of said functional element are provided, at least one of the plurality or plural types of said functional element is the touch panel.

9. The display device according to any one of Claims 1 to 8, wherein:

said functional element is an image-processing substrate which is disposed on a side of a back surface of the display element and which subjects the video signal to image processing based on an externally inputted control signal, or

when the plurality or plural types of said functional element are provided, at least one of the plurality or

plural types of said functional element is the image-processing substrate.

10. The display device according to any one of Claims 1 to 9, wherein:

said functional element is a separate display element to be laminated on the display element, or

when the plurality or plural types of said functional element are provided, at least one of the plurality or plural types of said functional element is the separate display element.

11. The display device according to any one of Claims 1 to 10, wherein the thin film substrate has a thin film layer including a polycrystalline silicon thin film.

12. The display device according to any one of Claims 1 to 10, wherein the thin film substrate has a thin film layer including a continuous grain boundary silicon thin film.

13. The display device according to any one of Claims 1 to 12, wherein the display element performs display by using a liquid crystal.

14. The display device according to any one of Claims 1 to 12, wherein the display element performs display by using an EL layer.